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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,954	07/01/2002	Masatoshi Kanaya	020287	4537

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EXAMINER	
PARSLEY, DAVID J	
ART UNIT	**PAPER NUMBER**
3643	

DATE MAILED: 11/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/069,954	KANAYA ET AL.
	Examiner	Art Unit
	David J Parsley	3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

PETER M. POON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 July 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Detailed Action

Preliminary Amendment

1. The preliminary amendment (paper no. 6) dated 3-7-02 has been received and entered and the changes to the claims have been noted.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains legal phraseology in particular the words "means" and "said". Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: on page 1 line 12 and line 18 the phrases "It should be noted "standardized manner" appear to not have spaces between each individual word.

On page 2 line 24 "peace" should be - -piece- -.

On page 3 line 17 "a irradiating" should be - -an irradiating- -.

On page 4 line 7 and line 10 "is preferably" should be - -preferably- -.

Appropriate correction is required.

Drawings

4. The drawings are objected to because figures 4a and 4b are not labeled in the drawings as stated in the specification under brief description of the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by

"such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 3 and 7 recite the broad recitation not more than 400nm, and these claims also recite "more preferably 250nm" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by JP Patent No. 1-202241 to Hayata et al.

Referring to claim 1, Hayata et al. discloses a method of detecting and removing a stripped shellfish carrying therewith unstripped residual shell, which is characterized by the steps of irradiating a light of specific waverange onto the stripped shellfish after finishing a shell-stripping work thereof to generate a fluorescent light from the stripped shellfish, and determining if there is residual shell left on the stripped shellfish on the basis of information on the intensity

of the fluorescent light generated from the stripped shellfish, and removing the stripped shellfish if there is any residual shell – see for example figures 1-14 and the English abstract.

Referring to claim 5, Hayata et al. discloses an apparatus for detecting and removing a stripped shellfish carrying therewith unstripped residual shell, the apparatus comprising means for irradiating a light of specific wave-range onto the stripped shellfish after finishing a shell-stripping work thereof, thereby enabling fluorescent light to be generated from the stripped shellfish – see for example figures 1-14 and the English abstract. Hayata et al. further discloses means for determining if there is residual shell of the shellfish left on the stripped shellfish on the basis of information on the intensity of fluorescent light obtained form the detection means, and means for removing the stripped shellfish if there is any residual shell on the basis of information obtained from the determining means – see for example figures 1-14 and the English abstract.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3/1, 3/2, 4/1, 4/2, 6, 7/5, 7/6, 8/5 and 8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayata et al. as applied to claims 1 and 5 above and further in view of U.S. Patent No. 5,902,177 to Tessier et al.

Referring to claim 2, Hayata et al. discloses a method of detecting and removing a stripped shellfish carrying therewith unstripped residual shell, which is characterized by the steps of irradiating a light specific wave-range onto the stripped shellfish after finishing a shell-stripping work thereof to generate a fluorescent light from the stripped shellfish, taking an image of the stripped shellfish, and determining if there is residual shell left on the stripped shellfish on the basis of information to be derived from the image taken up of shellfish on the intensity of the fluorescent light generated from the stripped shellfish, and removing the stripped shellfish if there is any residual shell – see for example figures 1-14 and the English abstract. Hayata et al. does not disclose the image is taken by a CCD camera. Tessier et al. does disclose the image is taken by a CCD camera – see for example columns 10-15. Therefore it would have been obvious to one of ordinary skill in the art to take the method of detecting shellfish with unstripped shell of Hayata et al. and add the image taken by a CCD camera, so as to make the method more effective and accurate in that the light can be accurately read with an image being quickly produced.

Referring to both claims 3/1 and 7/5, Hayata et al. does not disclose the shellfish is shrimp and the wave-range of the light is not more than 400nm. However it would have been obvious to one of ordinary skill in the art to use the device of Hayata et al. on shrimp because shrimp are a common shellfish and the device of Hayata et al. would work equally as well with shellfish the size of shrimp. Tessier et al. does disclose the wave-range of the light is not more than 400nm, more preferably around 250nm – see for example columns 14-15 which show the optimum wave-range around 335nm. Therefore it would have been obvious to one of ordinary skill in the art to take the method and device for removing shellfish with residual shell of Hayata

et al. and add the wave-range of the light being under 400nm of Tessier et al., so as to allow for the light to be easily detected by a light detection means.

Referring to both claims 4/1 and 8/5 Hayata et al. does not disclose the shellfish is crab and the wave-range of the light is not more than 400nm. However it would have been obvious to one of ordinary skill in the art to use the device of Hayata et al. on crab because crab are a common shellfish and the device of Hayata et al. would perform equally as well with shellfish the size of crab. Tessier et al. does disclose the wave-range of the light is not more than 400nm, more preferably around 250nm – see for example columns 14-15 which show the optimum wave-range around 335nm. Therefore it would have been obvious to one of ordinary skill in the art to take the method and device for removing shellfish with residual shell of Hayata et al. and add the wave-range of the light being under 400nm of Tessier et al., so as to allow for the light to be easily detected by a light detection means.

Referring to both claims 3/2 and 7/6, Hayata et al. does not disclose the shellfish is shrimp and the wave-range of the light is not more than 400nm. However it would have been obvious to one of ordinary skill in the art to use the device of Hayata et al. on shrimp because shrimp are a common shellfish and the device of Hayata et al. would work equally as well with shellfish the size of shrimp. Tessier et al. does disclose the wave-range of the light is not more than 400nm, more preferably around 250nm – see for example columns 14-15 which show the optimum wave-range around 335nm. Therefore it would have been obvious to one of ordinary skill in the art to take the method and device for removing shellfish with residual shell of Hayata et al. and add the wave-range of the light being under 400nm of Tessier et al., so as to allow for the light to be easily detected by a light detection means.

Referring to both claims 4/2 and 8/6 Hayata et al. does not disclose the shellfish is crab and the wave-range of the light is not more than 400nm. However it would have been obvious to one of ordinary skill in the art to use the device of Hayata et al. on crab because crab are a common shellfish and the device of Hayata et al. would perform equally as well with shellfish the size of crab. Tessier et al. does disclose the wave-range of the light is not more than 400nm, more preferably around 250nm – see for example columns 14-15 which show the optimum wave-range around 335nm. Therefore it would have been obvious to one of ordinary skill in the art to take the method and device for removing shellfish with residual shell of Hayata et al. and add the wave-range of the light being under 400nm of Tessier et al., so as to allow for the light to be easily detected by a light detection means.

Referring to claim 6, Hayata et al. discloses an apparatus for detecting and removing a stripped shellfish carrying therewith unstripped residual shell, the apparatus comprising means for irradiating a light of specific wave-range onto the stripped shellfish after finishing a shell-stripping work thereof, thereby enabling fluorescent light to be generated from the stripped shellfish, an image recording device disposed to face the stripped shellfish, means for determining if there is a residual shell left on the stripped shellfish on the basis of information on the intensity of fluorescent light that can be obtained from the image taken by the image recording device, and means for removing the stripped shellfish if there is any residual shell on the basis of information obtained form the determining means – see for example figures 1-14 and the English abstract. Hayata et al. does not disclose the image-recording device is a CCD camera. Tessier et al. does disclose the image recording device – 64 is a CCD camera – see for example columns 10-15. Therefore it would have been obvious to one of ordinary skill in the art to take

the apparatus to remove shellfish with unstripped shell of Hayata et al., and add the image-recording device being a CCD camera of Tessier et al., so as to make the apparatus more effective and accurate in that the light can be accurately read with an image being quickly produced.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to methods of detecting and removing shellfish in general:

U.S. Pat. No. 3,222,186 to D'Aquin – shows shell-stripping device

U.S. Pat. No. 5,429,546 to Kou – shows crustacean shell removing device

U.S. Pat. No. 5,522,764 to Keith et al. – shows shrimp shell peeling device

U.S. Pat. No. 5,928,072 to Fulcher et al. – shows crab shell removing device

U.S. Pat. No. 5,944,598 to Tong et al. – shows irradiating and CCD camera

U.S. Pat. No. 6,042,465 to Larson et al. – shows crawfish shell peeling device

U.S. Pat. No. Re. 36,664 to O'Brien et al. – shows camera image detection means

WO Pat. No. 94/14327 to De Vries et al. – shows crustacean shell peeling device

DE Pat. No. 4,301,208 to Keith – shows shellfish shell detecting means

JP Pat. No. 1-105144 to Hayata et al. – shows irradiation means to detect shell

9. Any inquiry concerning this communication from the examiner should be directed to David Parsley whose telephone number is (703) 306-0552. The examiner can normally be reached on Monday-Friday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor. Peter Poon, can be reached at (703) 308-2574.

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